

**SYSTEM, DECODER AND METHOD FOR TRANSMITTING,  
RECEIVING AND DECODING HIGH-SPEED DIGITAL DATA  
SIGNALS WITH REDUCED ELECTROMAGNETIC EMISSIONS**

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**ABSTRACT OF THE DISCLOSURE**

A digital communications system includes a transmitter and a receiver. The transmitter is capable of quadrature amplitude modulation (QAM) encoding each bit of at least one  $n$ -bit digital signal into at least one QAM signal and thereafter transmitting the QAM signals. And the receiver is capable of receiving the QAM  
10 signals and thereafter integrating the QAM signals. The receiver includes at least one tapped-delay line filter, which can then receive the integrated QAM signals and thereafter output a representation of each bit of the at least one  $n$ -bit digital signal.

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